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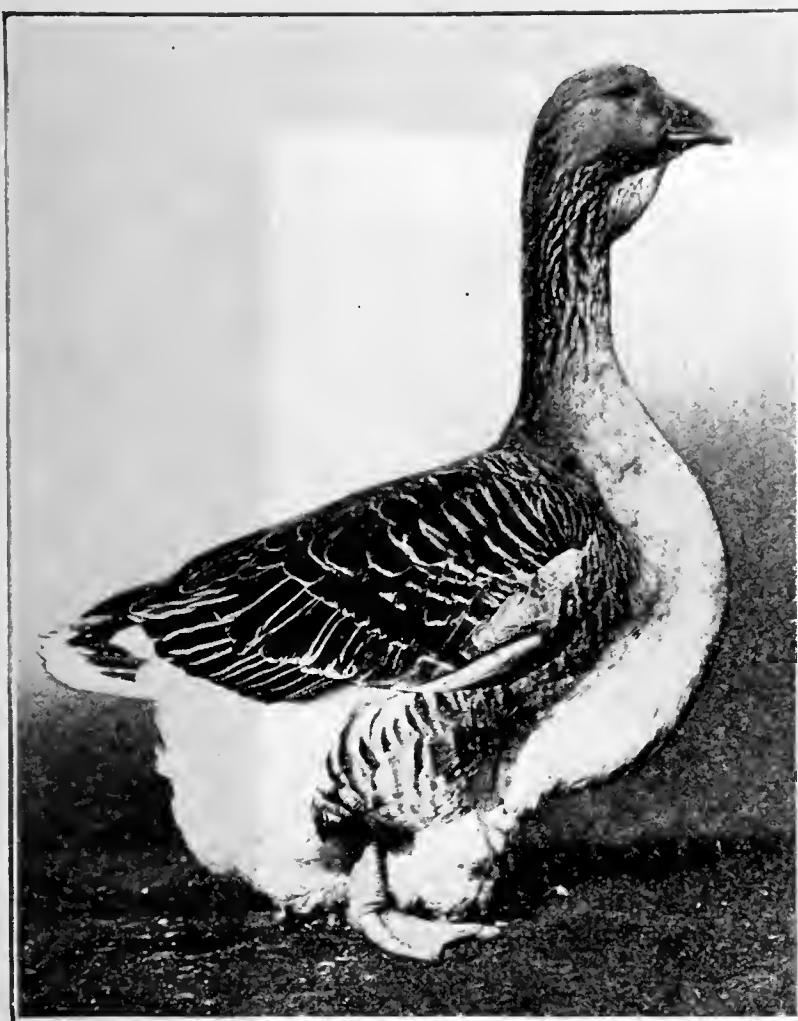
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GOOSE RAISING

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Of the Animal Husbandry Division



FARMERS' BULLETIN 767

UNITED STATES DEPARTMENT OF AGRICULTURE

Contribution from Bureau of Animal Industry

A. D. MELVIN, Chief

3
Washington, D. C.

February, 1917

THE Toulouse and the Embden are the most popular breeds of geese in this country. The Toulouse is the largest breed, the adult gander weighing 25 pounds and the goose 20 pounds.

Geese can be raised in small numbers successfully and at a profit on many farms where there is low, rough pasture land containing a natural supply of water.

They need a house only during cold or stormy weather, when an open shed should be provided.

Large boxes, barrels, or shelters are provided as nests for geese, or they are allowed to make nests on the floor of the house.

Adult geese should be fed for eggs about February 1, or so that the goslings will be hatched by the time there is good grass pasture. Feed a mash in the morning of equal parts by weight of corn meal, bran, and middlings, or low-grade flour, with 10 per cent of beef scrap, and give whole or cracked corn at night.

Goslings should be fed a mash of 2 parts shorts and 1 part corn meal by weight, changing at the end of three weeks to equal parts shorts and corn meal, with 5 per cent each of beef scrap and grit.

A fattening ration may be made of a mash of 1 part shorts and 2 parts corn meal by weight, with 5 per cent of beef scrap, which is fed in the morning, while corn is fed at night.

The period of incubation of goose eggs varies from 28 to 30 days. The first eggs usually are set under hens, while the last eggs which the goose lays may be hatched either under hens or under the goose if she becomes broody.

Further information with regard to the setting of eggs, as well as other details of the management of geese, are given in this bulletin.

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GOOSE RAISING.

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GOOSE PRODUCTION.

GESE are raised successfully in all parts of the United States, but are most abundant in the South and the Middle West. According to the census of 1910, Kentucky, with 400,000, contained the greatest number of geese, but this number was nearly equaled in each of the States of Tennessee, Missouri, and Arkansas. The total number of geese declined about 22 per cent from 1900 to 1910, due largely to the lack of cheap pasture land for grazing and perhaps partly to the limited demand for goose feathers and goose flesh. The last factor may be partly owing to the size of a goose, which is too large for the average family, and partly to the prevailing opinion that goose flesh is very greasy; this condition, however, is largely caused by improper cooking, by the failure to remove the surplus fat of the abdominal cavity, and by not skimming off the grease while cooking.

BREEDS.

Six breeds of geese have been admitted to the American Standard of Perfection, namely, Toulouse, Embden, Chinese, African, Wild or Canada, and Egyptian. In addition to the standard breeds there is the so-called Mongrel goose, which is a hybrid made by crossing one of these varieties, or the common goose, with wild geese. Crosses of the varieties of geese, especially of the Toulouse and Embden, are occasionally made, but without any apparent gain. The common goose found on many farms contains more or less blood of some of the standard breeds and of the Wild goose, and is usually considerably smaller than the Toulouse or the Embden. It may be improved by crossing with a pure-bred gander. The Toulouse, Embden, Chinese, and African are easily the most popular breeds of geese in this country, the first two greatly leading the other breeds. All economic breeds of geese are kept primarily for the production of flesh and feathers, although their eggs are occasionally used for culinary purposes.

THE TOULOUSE GOOSE.

The Toulouse goose (see illustration of gander on title-page and of goose as fig. 1) derives its name from the city of Toulouse, in southern France, in a territory noted for its geese. The Toulouse is the largest of the standard breeds of geese; the adult gander weighs 26 pounds, the adult goose and the young gander 20 pounds, and the young goose 16 pounds. The color of the plumage is dark gray on the back, gradually shading to light gray edged with white on the breast, and to white on the abdomen. The eye should be dark brown or hazel; the bill pale orange, and the shanks and toes a deep reddish orange. The body is massive, of medium length, broad and very deep, almost touching the ground. The female resembles the male, but is smaller. The Toulouse is a good

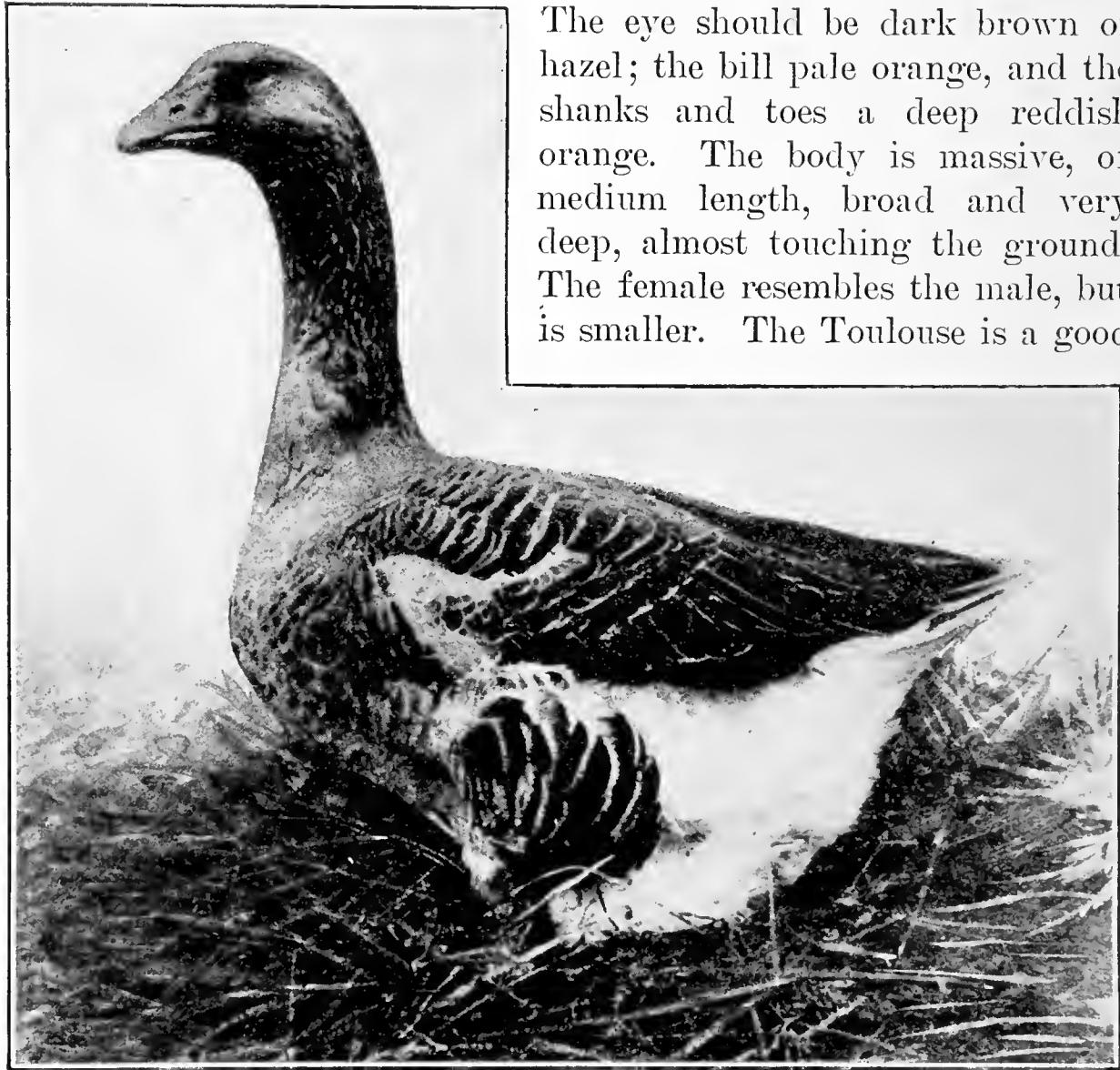


FIG. 1.—Toulouse goose.

layer, producing from 20 to 35 eggs a year; is docile, grows rapidly, and makes a good market bird. However, its dark pinfeathers make it a slightly less attractive market goose than the Embden.

THE EMBDEN GOOSE.

The Embden (fig. 2) was one of the first breeds of geese imported into the United States, where they were known as Bremen, from the city whence they came. It is a large white goose, slightly smaller and with somewhat longer legs than the Toulouse. The standard weights

are, for adult gander and goose, 20 and 18 pounds; young gander and goose, 18 and 16 pounds, respectively. The plumage is pure white. The Embden is only a fair layer, usually less prolific than the Toulouse, although the egg yield varies greatly among individuals in all the breeds. This breed makes a very good market bird, as it has white pinfeathers, is a rapid grower, and matures early.



FIG. 2.—Embden gander.

THE AFRICAN GOOSE.

The African (fig. 3) is a gray goose with a distinct brown shade, about the size of the Embden; it has, however, a distinctive knob or protuberance on its head, and its carriage is more



erect and the body more oblong than the Toulouse. The standard weights are the same as for the Embden, except that those of the young gander and goose are 16 and 14 pounds, respectively. The head, knob, and bill are black, the eyes are dark brown, the plumage dark gray on the wings and back and gray or light gray on the neck, breast, and underside of the body. The African is a good layer and makes a good market goose, although it has the objectionable dark pinfeathers. It is a rapid grower and matures early.

THE CHINESE GOOSE.

There are two standard varieties of Chinese geese, the Brown and the White (figs. 4 and 5). The standard weights are, adult gander and goose, 12 and 10 pounds; young gander and goose, 10 and 8 pounds, respectively. The Brown goose has a grayish-brown color which is lighter on the underside of the body, with a brown head, a dark-brown or black knob, and a black bill. The White goose has

a pure white plumage with an orange-colored bill and knob. Both varieties mature early and are said to be prolific layers and rapid growers, but shy and rather difficult to handle.

THE WILD OR CANADA GOOSE.

The Wild goose (fig. 6) is bred to some extent in captivity, and the young are sold to hunters to use as decoys. The Wild gander

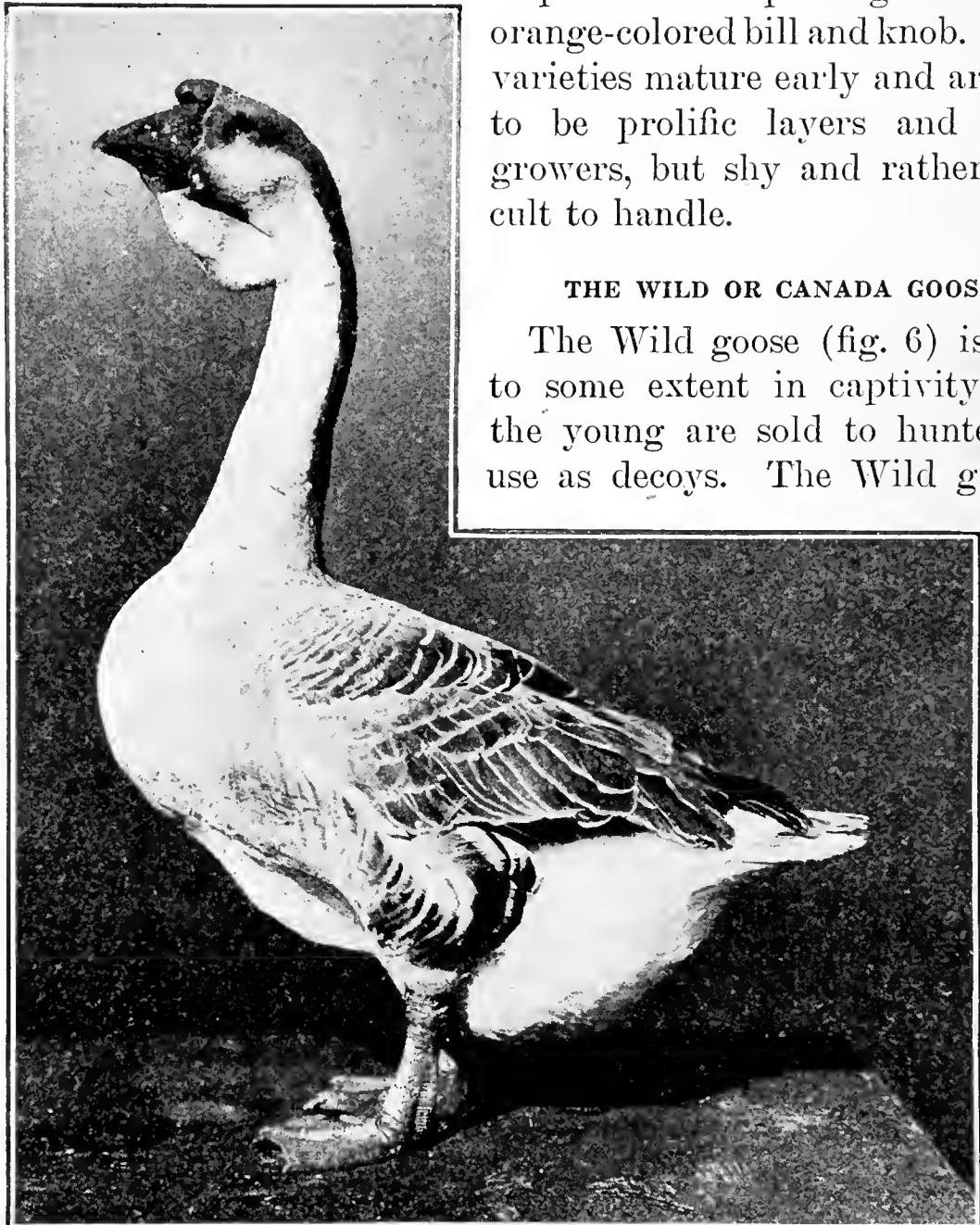


FIG. 3.—African gander.

is used to cross with either the common or the pure-bred goose, producing the so-called Mongrel goose. This Mongrel goose is highly prized as a market goose, but is usually sterile and will not breed. The standard weights of the Wild goose are the same as those of the Chinese goose. The body should be gray or dark gray in color, the breast light gray, and the lower part of the body white from the legs to the tail. The bill, eyes, head, neck, and tail are black. This goose

is said to be a rather poor layer and is sometimes difficult to breed successfully in captivity.

THE EGYPTIAN GOOSE.

This is a small brightly colored goose kept for ornamental purposes and rarely seen in this country. It resembles the Wild goose in shape and weighs 2 pounds less in each class. The bill is purple or bluish red, and the legs and toes are reddish yellow. The color of the plumage of the back and body is gray and black, with the lower part of the body pale buff or yellow, penciled with black. The breast is chestnut and gray, and the tail is black. The wings are a glossy black with white shoulders.

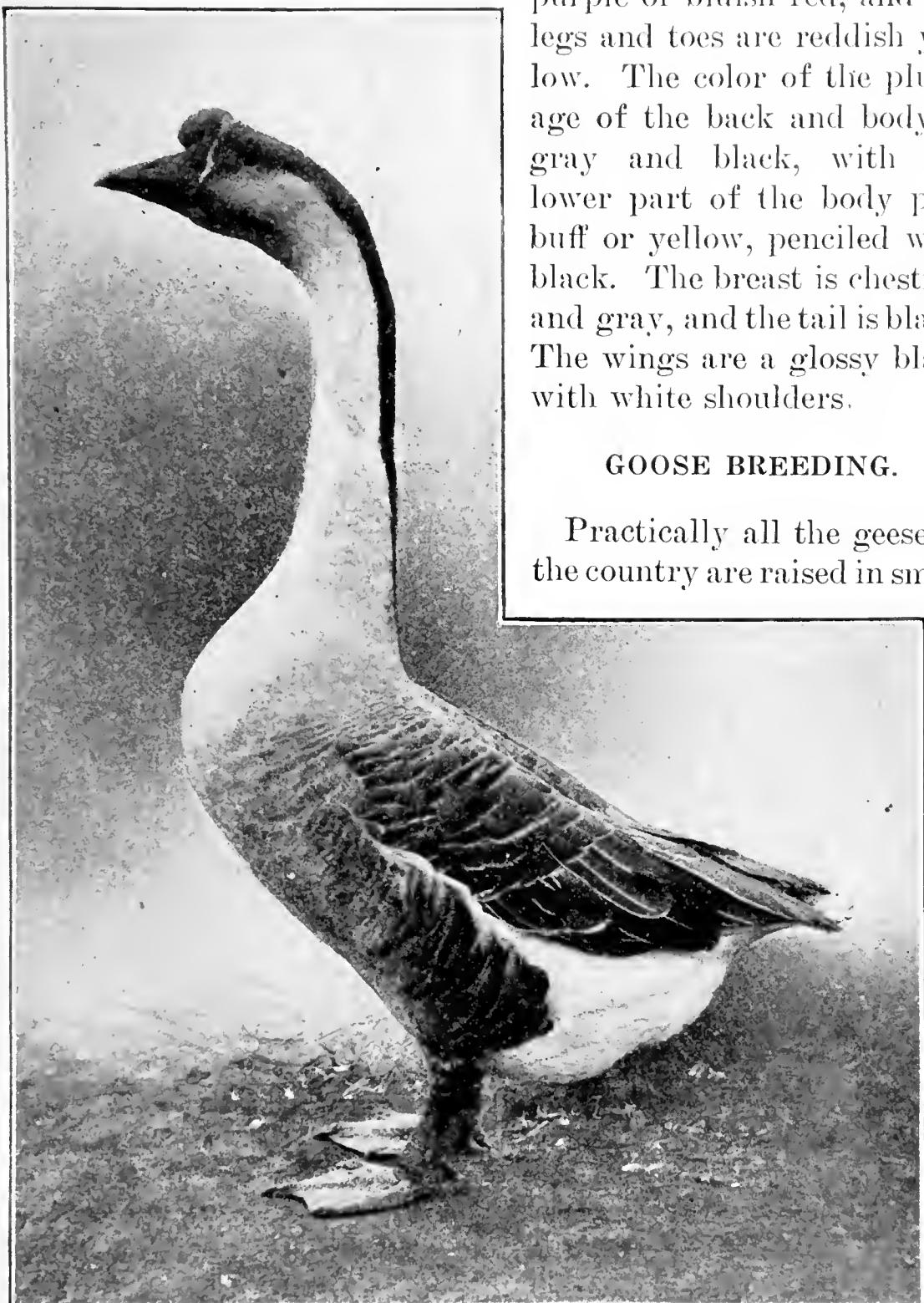


FIG. 4.—Brown Chinese gander.

GOOSE BREEDING.

Practically all the geese in the country are raised in small

flocks on general farms (see figs. 7 and 8), and few if any farms are devoted entirely to raising geese. The fattening of geese, however, is conducted as a special business in the producing sections, in which case the geese are collected from general farms, usually over a large area,

and fattened for a few weeks before they are killed. Geese can be raised in small numbers successfully and at a profit on farms where there is low rough pasture land with a natural supply of water. Geese are generally quite free from disease and all insect pests, but occasionally are affected by the diseases common to poultry. Grass makes up the bulk of the feed for geese, and it is doubtful whether it pays to raise them unless good grass range is available. A body

of water where they can swim is considered essential during the breeding season and is a good feature during the rest of the year. The market for geese is not so general as for chickens; this should be considered in undertaking the raising of geese. The demand and the price paid for geese are usually good in sections where goose fattening is conducted on a large scale. Many geese are kept in the South for the production of feathers rather than for their flesh, but the demand for their feathers is not so good as it has been, making the business less profitable.

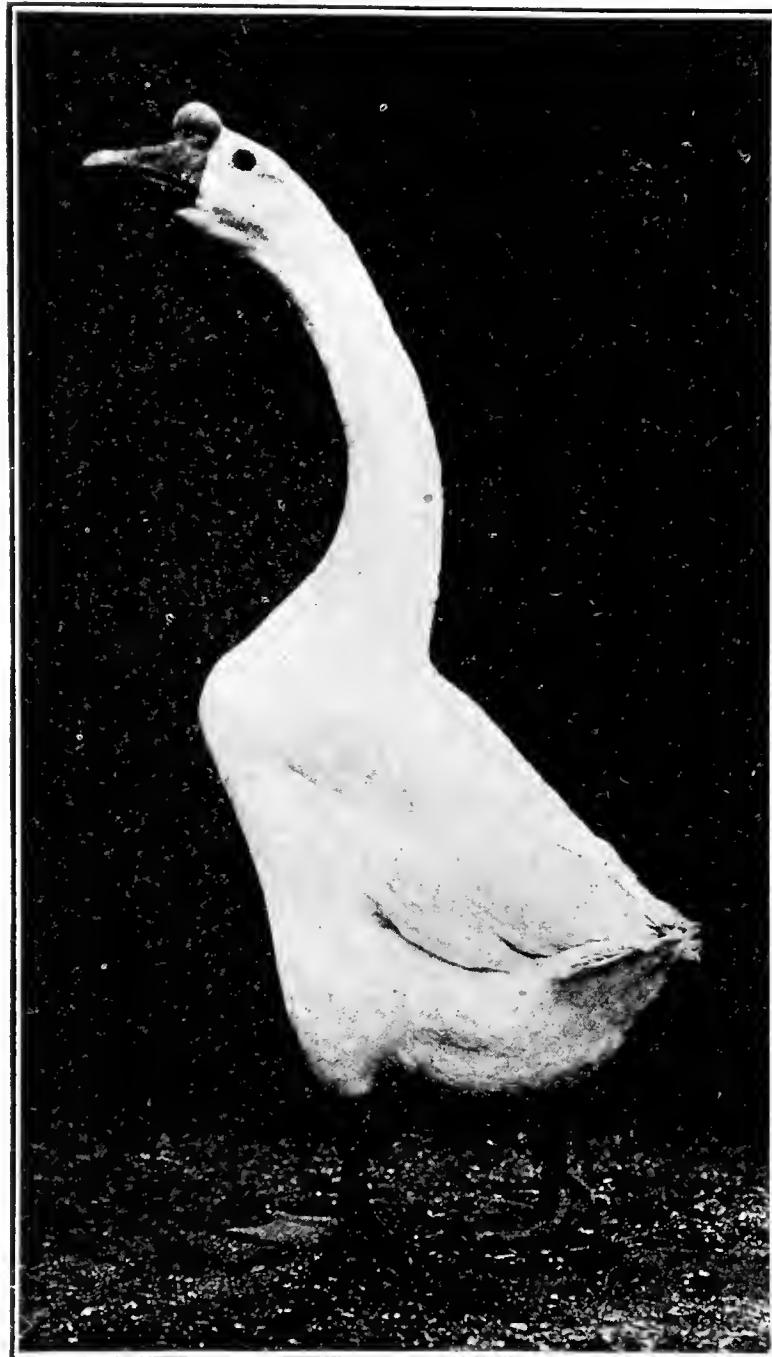


FIG. 5.—White Chinese gander.

should be provided, mature geese do not usually need a house. Some kind of shelter, such as a shed open on the south side, a poultry house, or a barn is usually provided by breeders in the North and is used by many in the South. Coops, barrels, or some other dry shelter should be provided for young goslings. The goose houses should be kept clean and plenty of clean straw provided for the floor.

HOUSES.

Except in winter or during stormy weather, when some protection

SELECTING AND MATING.

Geese, like other kinds of poultry, should be selected for size, prolificacy, and vitality. They should be mated several months prior to the breeding season to obtain the best results; therefore breeding stock should be bought in the fall. Goose matings are not changed from year to year unless the results are unsatisfactory. Sex is difficult to distinguish in geese, especially when they are young. The

gander is usually somewhat larger and coarser than the goose and has a shrill cry, while the female has a coarse cry. The male has a heavier, longer neck, and a larger head. The sex may be determined by inspecting the sexual organs or by the actions of the geese at mating time. The sphincter muscle which closes the anus of the female is folded and

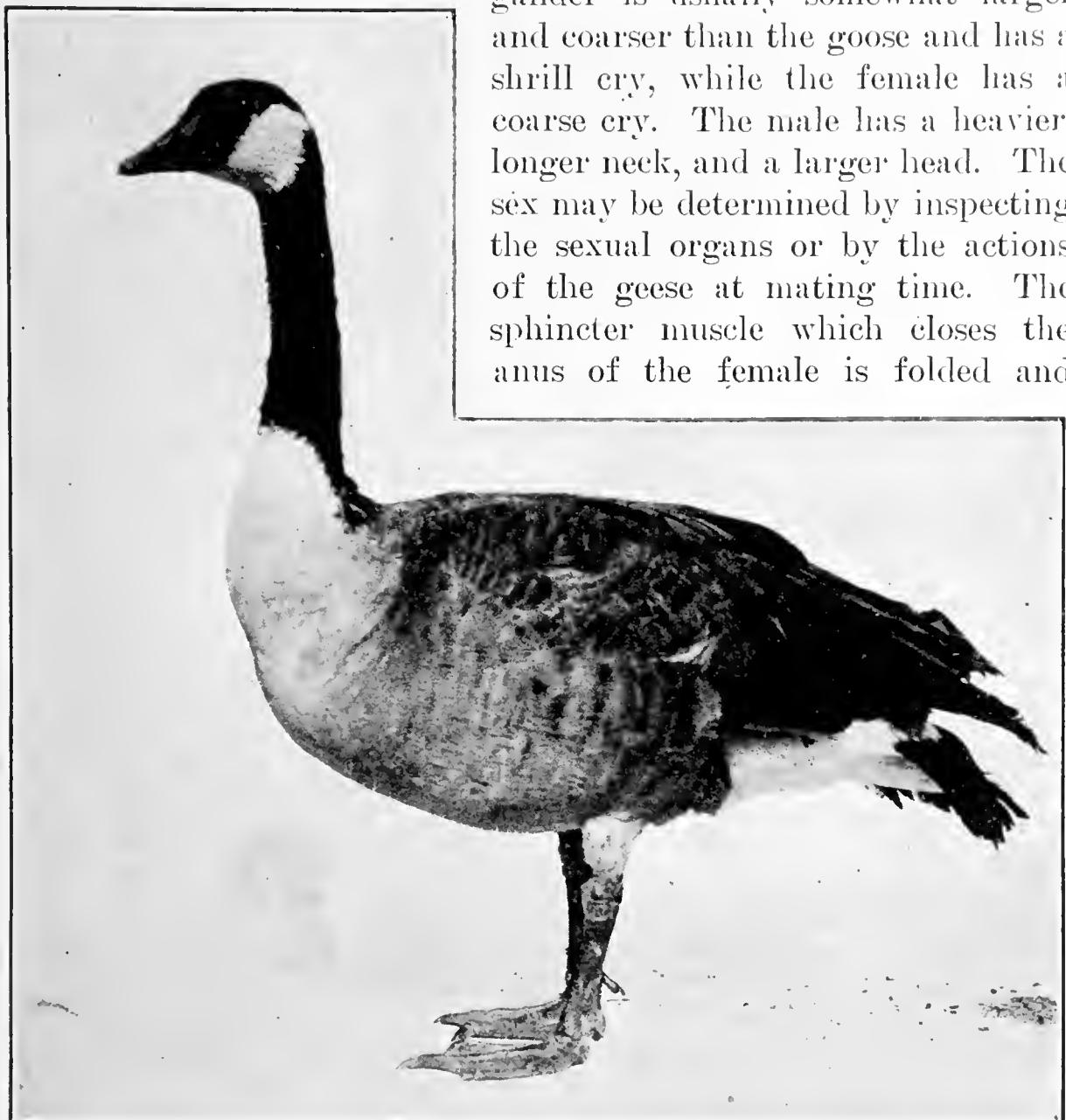


FIG. 6.—Wild or Canada gander.

winding or sinuous if stretched, while a light pressure on the corresponding section in the male will make the sexual organ protrude. This test is more easily made on a mature male and in warm weather. In common geese the male is lighter colored than the female.

A gander may be mated with from one to four geese, but pair or trio matings usually give the best results. The Wild gander usually mates with only one goose.

When mated, geese are allowed to run in flocks. (Figs. 7 and 8.) From 4 to 25 geese may be kept on an acre of land, and under most conditions 10 is a fair average. Wherever possible the geese should have free range. Many people in the South keep them to kill the weeds in the cotton fields.

Toulouse and Embden geese will breed when about 2 years old, but do not mature for another year. The females are usually kept until they are 12 to 14 years old, or as long as they lay well, but ganders are not generally kept after they are 8 to 9 years old; Wild ganders, however, are kept as long as they will breed. Geese are usually best for breeding when from 3 to 5 years old.

INCUBATION.

Geese are fed a ration to produce eggs during the latter part of the winter (about February 1) or so that the goslings will be hatched

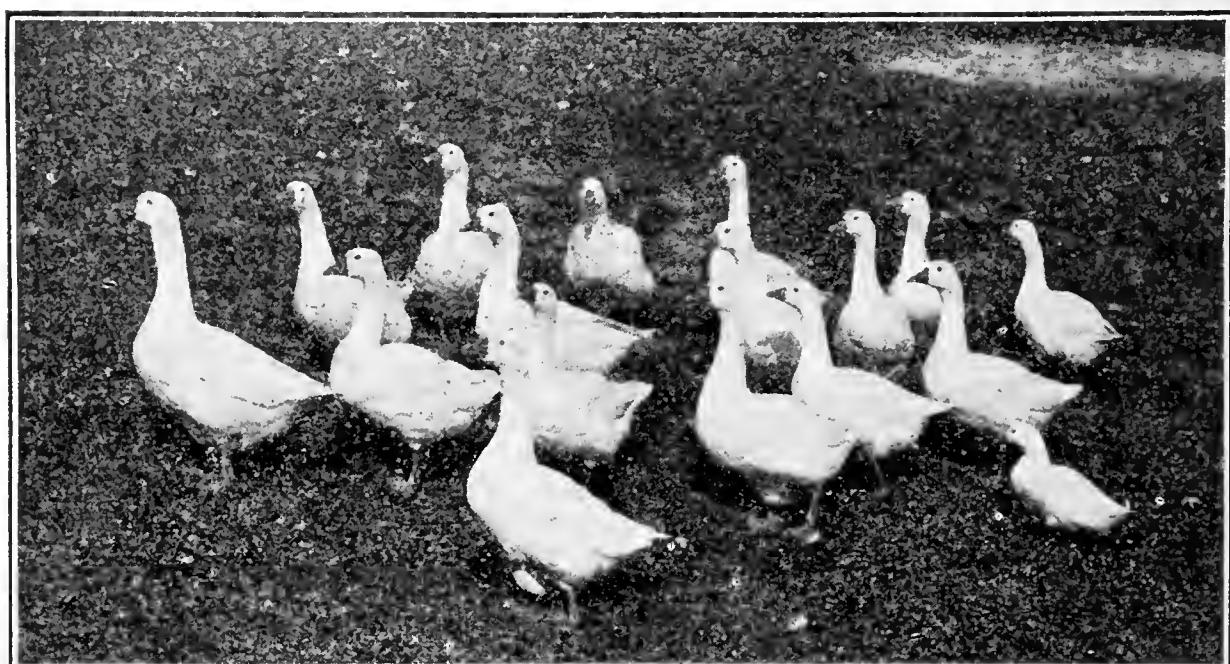


FIG. 7.—Flock of Embden geese.

by the time there is good grass pasture. They are allowed to make nests on the floor of the house, or large boxes, barrels, or shelters are provided for that purpose. The eggs should be collected daily and kept in a cool place where the contents will not evaporate too freely; if kept for some time they may be stored in loose bran. The first eggs are usually set under hens, while the last ones which the goose lays may be hatched either under hens or under the goose if she goes broody. If the eggs are not removed from the nest in which the goose is laying she will usually stop laying sooner than if they are taken away. The desire to sit can usually be broken up by confining her to a slat-bottom coop, with water to drink, but no feed, for 2 to 4 days. Some breeders prefer to raise all the goslings under hens, as geese sometimes become difficult to manage when allowed to hatch and rear their young. Hens used for hatching goose eggs

must be dusted with insect powder and have good attention, as, in the case of geese, the period of incubation is longer than in that of fowls. Goose eggs may be hatched in incubators and the goslings successfully raised in brooders, although this is not a common practice.

The period of incubation of goose eggs varies from 28 to 30 days. Moisture should be added to the eggs after the first week if set under hens or in incubators; this is usually done by sprinkling the eggs or the nest with warm water. Incubators should be run at a temperature of 101.5° to 102.5° F., or about $1\frac{1}{2}$ ° lower than for hens' eggs, and the eggs should be cooled longer. Four to six eggs are set under a hen and 10 to 13 under a goose. They may be tested about the tenth day, and those which are infertile or contain dead

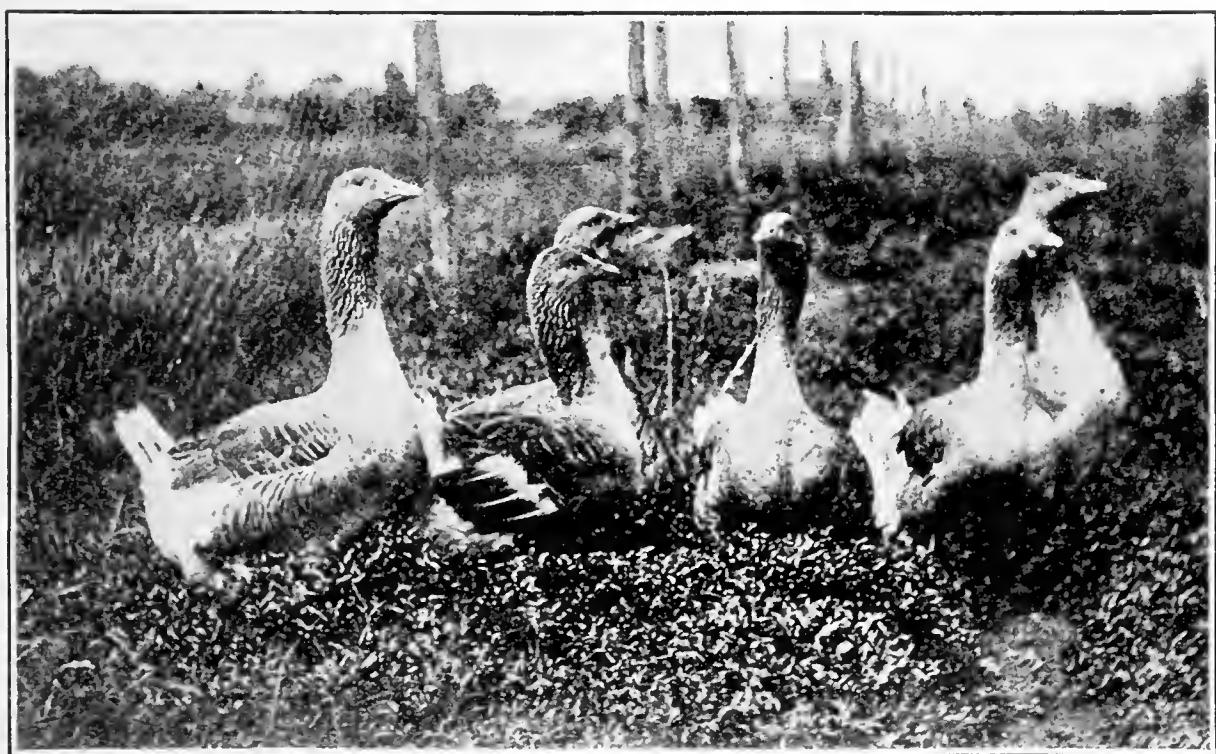


FIG. 8.—Flock of Toulouse geese.

germs should be removed. They hatch slowly, especially under hens, and the goslings are usually removed as soon as hatched and kept in a warm place until the process is over, when they are put back under the hen or goose. Some breeders who hatch with both geese and hens give all the goslings to the geese. To keep a record of their age and breeding the web of the feet of the goslings should be punched when hatched. Hens with goslings may be confined to the coop and the goslings allowed to range. The latter, especially if the weather is cold, are not usually allowed to go into water until they are several days old. In mild weather the hens are allowed to brood the goslings for from 7 to 10 days, when the latter are able to take care of themselves. Some breeders assert that polliwogs in pools will poison young goslings unless the mash or drinking water has been slightly salted before the goslings are turned out to pasture.

Good-sized growing coops, with board floors, should be provided for the goslings, and they must be protected from their enemies. When on range young goslings need some attention, as they may get lost or caught in post holes and odd corners. Shade should be provided in hot weather. They should not be allowed to run with large animals, as they may be injured or killed.

FEEDING GEESE AND GOSLINGS.

Geese are generally raised where they have a good grass range or pasture, as they are good grazers, and, except during the winter months, usually pick up most of their living. The pasture may be supplemented with light feeds of the common or home-grown grains or wet mash daily, the necessity and quantity of this feed depending on the pasture. Goslings do not need feed until they are 24 to 36 hours old, when they should be fed any of the mashes recommended for chickens or ducklings, or a mash or dough of two-thirds shorts (middlings) and one-third corn meal, which can be made equal parts shorts and corn meal, and 5 per cent of beef scrap added after six weeks. Bread and milk is an excellent feed for young goslings. Fine grit or sharp sand should be provided for goslings by feeding 5 per cent of it in their mash or keeping it in a hopper before them. If the goslings are to be fattened, the ration should be changed to one-third shorts and two-thirds corn meal by weight, with 5 per cent of beef scrap added, while a feed of corn should be given at night. Most geese breeders do not confine their geese for fattening, but feed them freely a few weeks on a fattening ration before they are to be marketed. The geese may be confined for two or three weeks and fattened, but some green feed or vegetables should be added to the ration.

Adult geese may be fed for eggs about February 1 on a mash of 1 pound of corn meal, 1 of bran, 1 of middlings or low-grade flour, and 10 per cent of beef scrap, which is fed in the morning; equal parts corn and wheat, or corn alone, is fed at night. Grit and oyster shell should be kept before geese when they are laying and may be provided all the time to advantage. A constant supply of drinking water should be available for both goslings and geese. Drinking fountains or pans should be constructed so that neither goslings nor older stock can get their feet into the water. If the geese need extra feed when not laying, the beef scrap should be left out and the quantity of corn meal increased to three parts. Any available roughage, such as cut clover, hay, alfalfa, silage, cabbages, mangel-wurzel beets, or any waste vegetables should be added during the winter months, or whenever no good pasture is available. The time to feed for eggs

depends upon the method of handling the geese, the section of the country, and the weather conditions, as goslings are usually hatched when the pastures are good.

PREPARING FOR MARKET.

Young geese, when fully feathered, are fattened in large numbers by buyers who make a specialty of this business. Several methods are used successfully in this special fattening of geese on a large scale. Six to eight geese are confined for three weeks in a pen and fed by hand five times daily on a mixture of 2 parts corn meal and 1 part of ground wheat and sifted ground oats, mixed with enough low-grade flour or "red dog" to make a stiff batter when water is added. This mixture is put through a sausage stuffer, cut into pieces 2 inches long and 1 inch thick, rolled in flour, and cooked like dumplings. This is fed warm, but after cooking the pieces are dipped in cold water to keep them from sticking together. Another method used is to confine the geese to large pens in a shed for from three to five weeks and keep whole corn in hoppers before them all the time, using oat straw for bedding. Considerable of the oat straw is eaten by the geese and serves as a good source of roughage. Corn silage may also be used for roughage.

A goose should be handled by its neck rather than by its legs and held with the back toward the attendant. In France and Germany a specialty is made of producing fattened goose livers, weighing from 12 to 32 ounces, by cramming geese which are about 6 months old on boiled corn. Some of these livers are preserved and called "pâtés de foie gras."

Before marketing the young geese the average farmer can feed advantageously a fattening ration either on grass range or confined to small yards, but it is doubtful whether it would pay him to confine them to individual or small pens and make a specialty of fattening unless he has a special market or retail trade for well-fattened stock. Young geese are in fair demand from June to January, while the demand is usually best at Thanksgiving and very good at Christmas. Ten-weeks-old goslings of the largest breeds of pure-bred geese weigh as much as 10 pounds if forced for rapid growth, and may often be marketed at this age to advantage. It is said to cost from 3 to 6 cents a pound to raise geese to 8 to 10 pounds weight.

Geese are usually killed and picked in the same manner as other kinds of poultry. They are generally stuck in the mouth with a long-bladed knife and then stunned by a blow on the back of the head with a short club. The wings are picked to the first joint, and the feathers are removed from the neck halfway to the head. The soft

pinfeathers and fine down may be partly removed by rubbing the body with moistened hands or by shaving the skin. Geese may be steamed after killing by hanging on hooks in the top of a steam box or barrel, which can be made air-tight, and left there until the soft feathers on the breast come off easily. The length of time to leave them in the steam barrel depends on the flow of the steam, varying from one-half to two minutes. The wing and tail feathers are pulled before the geese are steamed. A good method for removing the down is to sprinkle powdered rosin over the body of the goose and dip it into hot water, which melts the rosin so that it and the down can be easily rubbed off, leaving the body clean. Geese may also be steamed by scalding slightly and wrapping the body tightly in burlap or cloth to allow the steam to work thoroughly through the feathers. Some markets prefer dry-picked geese, while in other markets no difference is made in the price of scalded or dry-picked geese.

After the geese are picked they are usually washed and put into ice water for 1 to 2 hours to cool and become plump. Many farmers sell their geese alive. When dressed poultry is shipped from the farm it should be first cooled and then packed in clean containers, which can be packed in ice and shipped by express in such a way that the poultry does not come in contact with the ice or drippings. It costs about 11 cents each to pick geese. Goose feathers sell at from 30 cents to \$1 a pound and should be carefully saved and dried. White are worth considerably more than mixed-colored feathers. Scalded feathers are not usually considered of any value, but steamed ones are as good as the dry-picked.

Nearly all breeders of geese in the South and many in the Middle West and the North pluck the feathers from the live geese at some time prior to molting. Some pick as often as every six weeks during the spring, summer, and early fall, while others pick only once or twice a year, either in the spring or both in the spring and in the fall. Feathers are considered ripe for picking when the quills appear dry and do not contain blood. The average yearly production of feathers per goose is about one and one-tenth pounds. This practice of plucking geese, however, is considered by many breeders to be cruel and injurious. Geese should not be picked during the breeding season. The demand for goose feathers and the practice of plucking geese appear to be decreasing, while more attention is given to the production of young geese for market.

REPORTS FROM BREEDERS.

About 300 replies were received from a list of questions sent to breeders of geese in all parts of this country where geese are commonly raised. These data have been divided into two sets, one

covering sections in the Southeastern States as far north as the Ohio River and as far west as Oklahoma, while the other sections (Northeastern, Central, and Pacific Coast) make up the other group.

REPORTS FROM THE SOUTH.

Small common geese were kept very largely in the Southern States, while only a few breeders kept pure-bred geese, of which the Toulouse, Embden, Chinese, African, and Canada were the most popular, in this order. Almost all these breeders picked feathers from the live geese once or several times during the year, some farmers picking the feathers as often as once in six weeks. Many reported keeping the geese largely for the production of feathers and did not consider them profitable as market poultry. During the winter about one-third provided some shelter, such as an open shed or a barn, but very few had houses used only by the geese.

The averages for these Southern States showed that the gander weighed 11.2 pounds, the goose 10.7 pounds, and the young goose 7.8 pounds. The geese produced 1.15 pounds of feathers, which were valued at 54 cents a pound. An average yield of 16.3 eggs was obtained, of which about two-thirds were hatched under geese and the rest under hens. The breeding stock were mated either in pairs or in trios of one gander with two geese, with an average mating of two males to three females. Three-fourths of the geese were marketed alive at an average price of 76 cents, giving a profit of 49 cents. Geese sold for breeding purposes were not included in averaging the selling price and the profit. The selling price and the profit reported by farmers who produced geese only or largely for sale as breeding stock were considerably greater than those reported for market stock.

REPORTS FROM THE NORTH AND WEST.

Pure-bred geese were kept very largely in the Northern, Central, and Pacific Coast States, as shown by the reports, although some common geese were reported from most of them. The Toulouse and Embden were by far the most popular breeds, while the other breeds ranked in the following order: Chinese, African, and Canada. Less than half of the breeders in those States reported that they picked feathers from the live geese, the practice being more common and picking more frequent in the States farthest south, although it was reported from all the States. Most breeders picked the geese only once or twice, and then only during warm weather, but a few reported picking several times during the year. More than three-fourths of the breeders provided shelter for the geese during the winter, and many had houses used only by the geese.

In the averages for these States the gander weighed 17.7, the goose 15.2, and the young goose 13.2 pounds, which is several pounds heavier, in each class, than is shown in the reports from Southern States. The geese produced an average of 1.11 pounds of feathers, valued at 69 cents a pound. The average egg production was 26.7, of which slightly more than half were hatched under hens. Apparently hens were used much more commonly for hatching than in the South, on account of the higher egg yield and the greater weight of the geese. With larger egg yields part of the eggs would have to be hatched under hens or in incubators, while some breeders who keep large, heavy geese prefer to use hens for hatching. Most of the geese were mated in pairs, some in trios, with an average of four males to nine females. Three-fifths of the geese were marketed alive and brought an average price of \$1.82 and a profit of \$1.16 each.

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